

Jan. 21, 1930.

W. L. TAYLOR

1,744,285

MULTIPLEX BAG

Original Filed Nov. 21, 1925 3 Sheets-Sheet 1

Fig. 1.

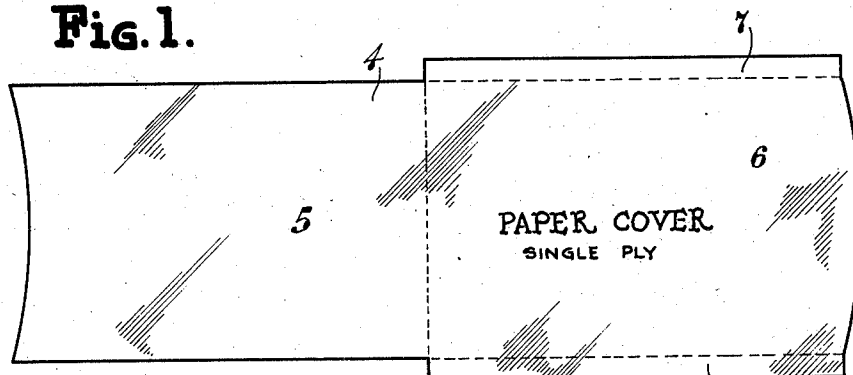


Fig. 2.

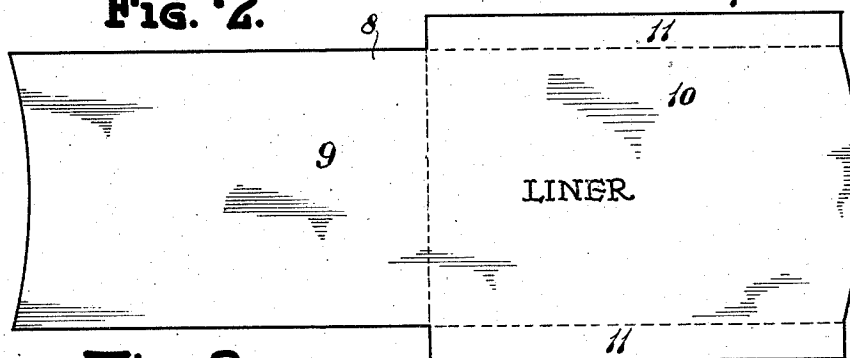
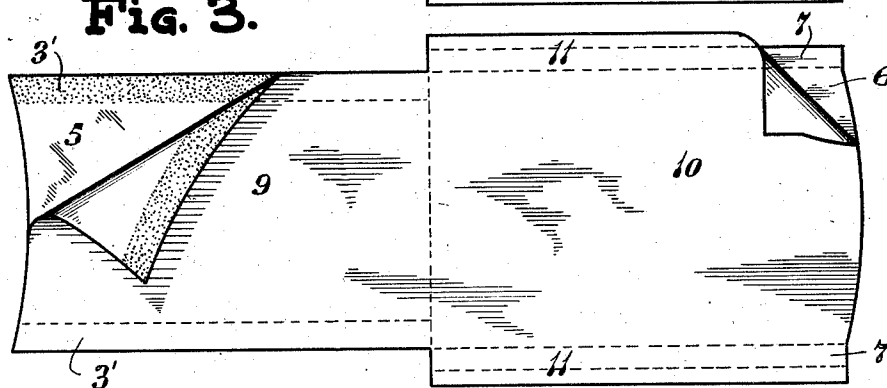


Fig. 3.



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Fig. 4.

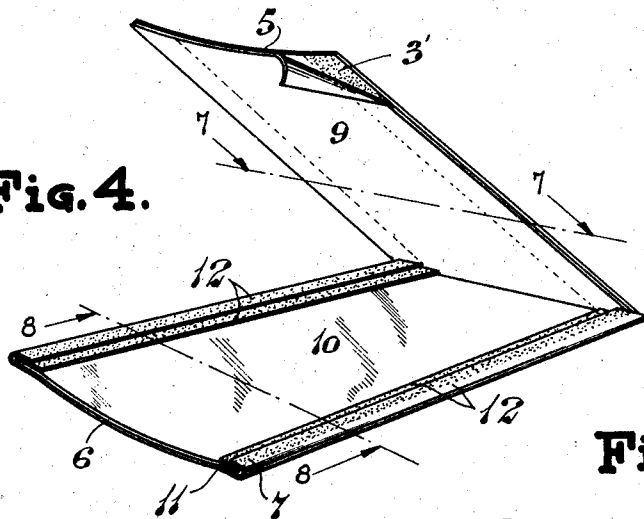


Fig. 5.



Fig. 6.

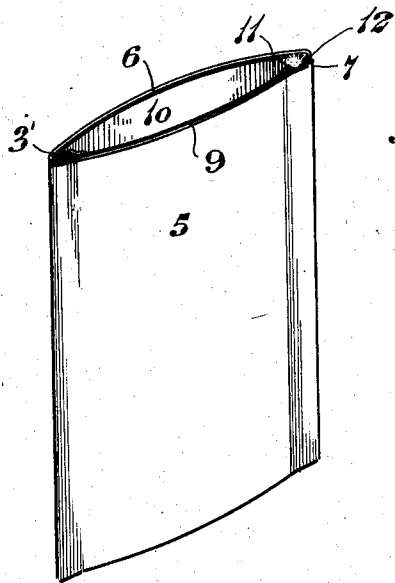
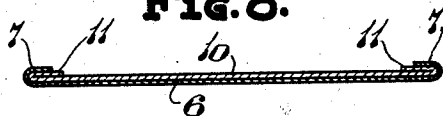


Fig. 7.



Fig. 8.



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Fig. 9.

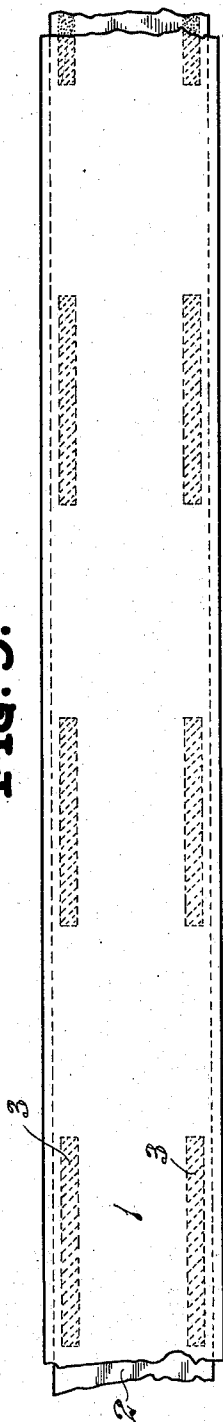


Fig. 10.

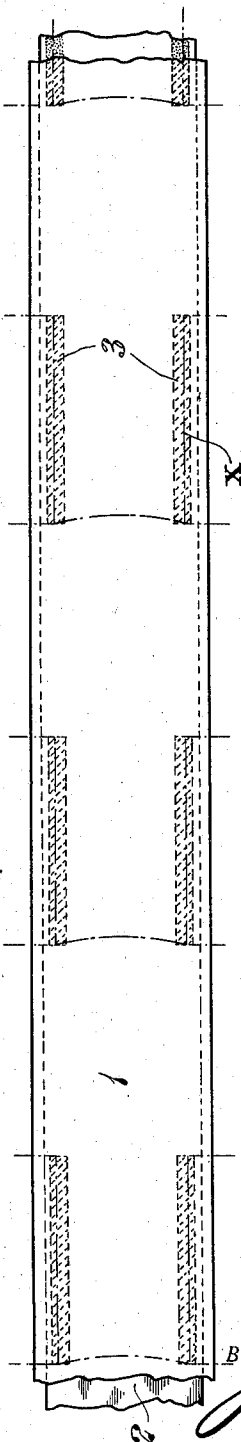
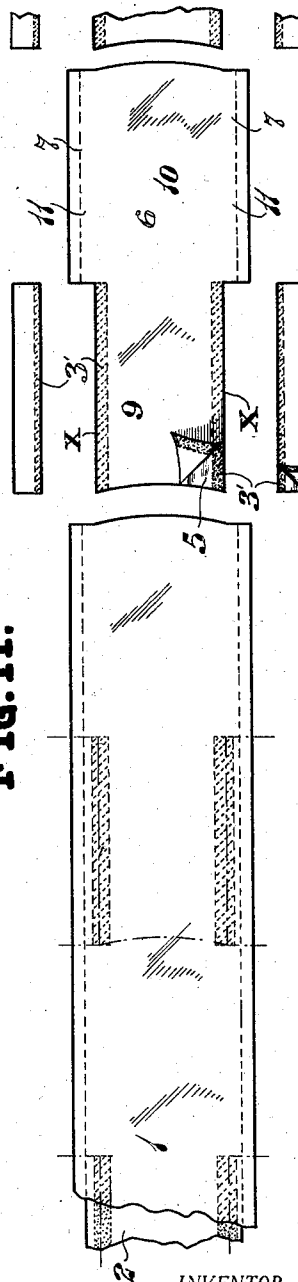


Fig. 11.



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UNITED STATES PATENT OFFICE

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MULTIPLEX BAG

Original application filed November 21, 1925, Serial No. 70,592. Divided and this application filed June 11, 1927. Serial No. 198,208.

My invention relates to paper bags and more particularly to such bags having more than one ply of paper for use as tobacco containers. This application is a division of my copending application, Serial No. 70,592.

The objects of my invention are to simplify and cheapen the means of construction of the bag; to insure accurate and proper registration of the plies of paper during the operation of making them; to provide greater pliability of the finished bag whereby heavier plies of material may be used without undesirable stiffness in the sides of the bag when shaping it for receiving the contents and also when making the closure at the top after the contents are filled in.

Other objects and advantages are obtained as herein set forth.

My invention consists in taking two long strips of paper of different widths and gluing them together at intervals a short distance away from their longitudinal edges whereby said plies are held in absolute registry with each other during all subsequent operations, then dieing out the individual bag blanks from said longitudinal strips whereby the narrow side of each ply will be of the same dimension and whereby the longitudinal edges of said narrow side will be glued together.

My invention also consists in the bag as an article of manufacture.

In the drawings:

Fig. 1 is a view of the outer ply or cover of a bag blank;

Fig. 2 is a view of the inner ply or liner of the bag blank;

Fig. 3 is a view of the inner and outer plies of the bag blank glued together along the longitudinal edges of the narrow side;

Fig. 4 is an isometric view of the bag blank shown in Fig. 3 after the longitudinal flaps of the wider side have been folded inwardly and coated with glue on their exposed surfaces with the narrower side partly folded into position;

Fig. 5 is a top view of the open end of the bag showing the sides glued together along their longitudinal edges;

Fig. 6 is an isometric view of the completed bag;

Fig. 7 is a transverse section on the line 7—7 of Fig. 4; and

Fig. 8 is a transverse section on the line 8—8 of Fig. 4;

Fig. 9 represents two long superposed strips of paper of different widths pasted together at intervals a short distance from their longitudinal edges;

Fig. 10 is a similar view showing by dot and dash lines the parts cut away in forming the individual bag blanks; and

Fig. 11 is a view similar to Fig. 10, showing one of the bag blanks detached and the discarded or waste parts cut away.

The preferred manner of making bags in accordance with my invention consists in taking long strips of paper 1 and 2 in rolls of different widths and by suitable means securing them together at intervals a short distance from their longitudinal edges by narrow bands of glue 3, as shown in Fig. 9, so that when the individual bag blanks are dieed out from this multiply strip of paper, the plies of the narrow side of the bag blank along its longitudinal edges will be securely held in registry by the bands of glue and the outer or cover ply of the wider side will be narrower than the inner ply or liner, as shown in Figs. 3 and 11.

The cover or outer ply 4 is formed of narrow side 5 and wider side 6 with securing flaps 7 along its longitudinal edges, as shown in Fig. 1.

The liner or inner ply 8 comprises narrow side 9 and wider side 10 having securing flaps 11 along its longitudinal edges and adapted to be folded inwardly to the width of the narrow side, as indicated by the dotted lines. The liner, as shown in Fig. 2, is of the same shape as the cover shown in Fig. 1, except that the flaps 11 of the liner are wider than the flaps 7 of the cover.

As previously stated, the long strips of paper are secured together at intervals by bands of glue or other adhesive material, as shown in Fig. 9, so that when each bag blank is dieed out from said band it will comprise the two ply blank, as illustrated in Figs. 3

and 11, in which the glue band 3' extends along each longitudinal edge of the narrow side only of the bag.

The bands of adhesive material 3 which bind the strips of paper together at intervals are preferably formed sufficiently wide so that when the bag blanks are died out the die cuts through and removes a small part of the adhesive material in order to insure complete adhesion of the plies along their longitudinal edges, as clearly shown at X in Figs. 10 and 11.

The next step consists in folding the flaps 7 and 11 inwardly, as shown in Fig. 8, then applying glue thereto, as shown in Fig. 4, and then folding the narrow side of the bag blank thereon to form the completed bag, as shown in Figs. 5 and 6.

An important advantage of my invention consists in securing registration of the respective plies of material from side to side by gluing them together in such relationship at intervals before dieing out the individual bag blanks, as shown in Fig. 11. This insures proper registration of the superposed strips or webs during all subsequent operations, including the gluing of the securing flaps and folding and gluing the bag sides together. It also insures registration of the strips of paper when being folded in a single set of formers. It has the advantage of requiring only one set of dieing out and cutting cylinders and one waste exhaust system to receive the waste material cut away. It permits the use of simplified mechanism, making more speedy and efficient adjustment of the machine; has the advantage of a greater quantity of paper in dieing out moisture-proof and insulated papers, such as are combined with asphalt, that is to say, the greater the thickness of the paper in relation to the quantity of asphalt, the greater cleaning effect it will have upon the knives of the dieing-out mechanism. As too limited a quantity of asphalt does not give moisture-proof quality it is highly desirable to fabricate materials for use in bags in such a manner as will allow a maximum quantity of asphalt with efficient operation.

Gluing the narrow sides of the blanks together, along their longitudinal edges will not allow displacement of the liner in subsequent packing operations. Gluing the blanks together only on the narrow side and not gluing the inturned flaps together but merely gluing the narrow side of the blank to the inturned flaps allows the liner to flow freer into position when the bag is being packed with material such as tobacco, and gives greater pliability to the bag by being so glued, so that it is possible to use heavier plies of paper or other material and not have undesirable stiffness in the side of the bag when shaping it for receiving the contents and also when making the closure at the top,

after the contents are filled in. Blanks glued together in this manner can be gripped more positively in the delivery mechanism of the bag machine, especially when a paraffin liner is used as one ply thereof, the coating of paraffin having a tendency to compress under the gripper bar and making it more difficult to hold and deliver. The liner being glued into position will insure greater accuracy in the final fold when pressure must be exerted on the point where the bag is glued together. This will avoid, in a large measure, an undesirable bias fold if the pressure on the delivery mechanism is not accurate or uniform.

While I have set forth a particular construction of making the bags, it will be understood that it is capable of modification without departure from the scope or spirit of the invention, as defined in the claims, as for instance, a larger number of plies than two may be employed, if desired.

What I claim as new and desire to secure by Letters Patent is:

1. As an article of manufacture, a multiplex bag comprising a plurality of plies of superposed pliable material each having both plies of one side of the bag of the same dimension and smaller than the dimension of the other side of the bag and having one ply of the larger side of the bag of larger dimension than the superposed ply with inturned flaps of one ply of the larger side smaller than the inturned flaps of the adjacent ply and said inturned flaps being adhesively secured to the liner of the narrow side of the bag folded thereon.

2. As an article of manufacture, a multiplex bag comprising a plurality of plies of superposed pliable material the inner ply of which constitutes the liner of the bag and the outer ply of which constitutes the cover of the bag, the liner and cover on one side of the bag being of the same dimension and adhesively secured together between their longitudinal edges, and smaller than the dimension of the other side of the bag, said last-mentioned side having flaps on the liner and flaps on the cover, the flaps of the liner being wider than the flaps of the cover, which flaps are adapted to be inturned and adhesively secured to the liner only of the narrower side.

WILLIAM L. TAYLOR.